



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

JUL 15 2010

AE-17J

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Tim Stickler  
Environmental Supervisor  
New Energy Corporation  
3201 West Calvert  
South Bend, Indiana 46680-2289

RE: Notice and Finding of Violation issued to New Energy Corporation, South Bend, Indiana

Dear Mr. Stickler:

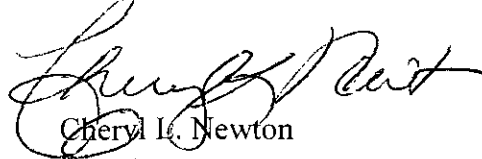
The U. S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (Notice) to New Energy Corporation (New Energy). This Notice is issued in accordance with Section 113(a) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a).

EPA has determined that New Energy is violating the Prevention of Significant Deterioration requirements under Part C of the Act, 42 U.S.C. §§ 7470 *et seq.*; State Implementation Plan (SIP) provisions approved by EPA under Section 110 of the Act, 42 U.S.C. § 7410; New Source Performance Standards under Section 111 of the Act, 42 U.S.C. §§ 7411 *et seq.*; and the Operating Permit requirements under Title V of the Act, 42 U.S.C. §§ 7661 – 7661e at its facility located at 3201 West Calvert Street, South Bend, Indiana.

EPA is offering New Energy an opportunity to confer with us about the violations cited in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violations, and the steps you will take to bring the facilities into compliance. Please plan for your technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contacts in this matter are Gina Harrison and Shilpa Patel. You may call them at (312) 353-6956 or (312) 886-0120, respectively, to request a conference. You should make your request for a conference no later than 10 calendar days after you receive this letter, and we should hold any conference within 30 calendar days of your receipt of this letter.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Cheryl L. Newton".

Cheryl L. Newton  
Director

Air and Radiation Division

Enclosure

cc: Matthew Chaifetz, IDEM

1. When the Act was passed in 1970, Congress exempted existing facilities from many of its requirements. However, Congress also made it quite clear that this exemption would not last forever. As the United States Court of Appeals for the D.C. Circuit explained in *Alabama Power v. Castle*, 636 F.2d 323, 400 (D.C. Cir. 1979), “[t]he statutory scheme intends to ‘grandfather’ existing

industries; but...this is not to constitute a perpetual immunity from all standards under the PSD program.” Rather, the Act requires grandfathered facilities to install modern pollution control devices whenever the unit is proposed to be modified in such a way that its emissions may increase.

2. On June 19, 1978, EPA promulgated regulations pursuant to Part C of Title I of the Act. 43 Fed. Reg. 26403 (June 19, 1978).

3. The PSD provisions of Part C of Title I of the Act require preconstruction review and permitting for modifications of stationary sources. *See* 42 U.S.C. §§ 7470-7492. Pursuant to applicable regulations, if a major stationary source located in an attainment area is planning to make a major modification, then that source must obtain a PSD permit before beginning actual construction. *See* 40 C.F.R. § 52.21(a)(1)(iii). To obtain this permit, the source must, among other things, undergo a technology review and apply BACT; perform a source impact analysis; perform an air quality analysis and modeling; submit appropriate information; and conduct additional impact analyses as required.

4. On August 7, 1980, EPA determined that the Indiana PSD rules did not satisfy the Act's requirements and disapproved them under Section 110(a)(3) of the Act, 42 U.S.C. § 7410(a)(3). At that same time, EPA incorporated the provisions of 40 C.F.R. § 52.2, 1(b) through (w) into the Indiana SIP, 45 Fed. Reg. 52676, 52741, as amended at 46 Fed. Reg. 9580 and codified at 40 C.F.R. § 52.793. On January 29, 1981, EPA delegated to the Indiana Department of Environmental Management (IDEM) the partial authority to review and process PSD permit applications, and to implement the federal PSD program. 46 Fed. Reg. 9580, 9583.

5. On March 23, 2003, EPA conditionally approved into the Indiana SIP, 326 IAC 2-2, which contains Indiana's PSD regulations. 68 Fed. Reg. 9892, 40 C.F.R. § 52.770(c)(147); the citations set forth in the codification were corrected via a Notice published on June 27, 2003, 68 Fed. Reg. 38197. On May 20, 2004, EPA approved the 326 IAC 2-2 rules into the Indiana SIP. 69 Fed. Reg. 29071, 40 C.F.R. § 52.770(c)(165). On June 18, 2007, EPA partially approved the revisions to 326 IAC 2-2. 72 Fed. Reg. 33395.

6. Section 169 of the Act, 42 U.S.C. §7479, defines one type of “major emitting facility” as “fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input” “which emits, or have the potential to emit, one hundred tons or more of any air pollutant.” The PSD regulations define “major stationary source” as including a “fossil fuel-fired steam electric plant of more than 250 million British thermal units per hour heat input” “which emits, or has the potential to emit, 100 tons per year or more of any regulated NSR pollutant.” 40 C.F.R. § 52.21(b)(1)(i)(a). See also 326 IAC 2-2-1(gg).

7. 40 C.F.R § 52.21(a)(2)(iii) provides that “no new stationary source or major modification to which the requirements of paragraphs (j) through (r)(5) of this section apply shall begin actual construction without a permit that states that the stationary source or modification will meet those requirements.” See also 326 IAC 2-1-2.

8. 40 C.F.R § 52.21(j)(3) provides that “[a] major modification shall apply best available control technology for each regulated NSR pollutant for which it would result in a significant net

emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.” See also 326 IAC 2-2.

9. The PSD regulations at 40 C.F.R § 52.21(b) define “major modification” as “any physical change in or change in the method of operation of a major source that would result in a significant emissions increase (as defined in paragraph (b)(40) of this section) of a regulated NSR pollutant (as defined in paragraph (b)(50) of this section); and a significant net emissions increase of that pollutant from the major stationary source.” 40 C.F.R § 52.21(b)(2)(i). See also 326 IAC 2-2-1(ee).

10. The PSD regulations state, *inter alia*, that “‘net emissions increase’ means, with respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero: (a) The increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph (a)(2)(iv) of this section; and (b) Any other increases or decreases in actual emissions at the major stationary sources that are contemporaneous with that particular change and are otherwise creditable. . . ” 40 C.F.R. § 52.21 (b)(3)(i). See also 326 IAC 2-2-1 (jj).

11. The PSD regulations state that: “Significant means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would exceed any of the following rates: SO<sub>2</sub>: 40 tpy. 40 C.F.R. §52.21(b)(23)(i). See also 326 IAC 2-2-1 (xx).

12. 40 C.F.R. § 52.21(j) requires that: 1) a major stationary source or major modification meet all applicable emissions limitations under the applicable SIP along with any standards of performance under 40 C.F.R. Parts 60 and 61; 2) any new major stationary sources apply BACT for each pollutant subject to regulations under the Act for which the source would have the potential to emit in significant amounts; and 3) any source apply BACT for each pollutant subject to regulation under the Act for which a major modification which would result in a significant net emissions increase. See also 326 IAC 2-1-2.

### **New Source Performance Standards**

13. Under Section 111 of the Act, 42 U.S.C. § 7411, the Administrator promulgated the New Source Performance Standards (NSPS) General Provisions, at 40 C.F.R. Part 60, Subpart A, and the “Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971,” codified at 40 C.F.R Part 60, Subpart D. Subpart D applies to each fossil-fuel-fired steam generating unit of more than 73 megawatts (250 million British thermal units per hour (MMBTU/hr)) heat input of fossil fuel. 40 C.F.R § 60.40(a)(1).

14. 40 C.F.R. § 60.43(a)(2) provides that no owner or operator subject to the provisions of Subpart D shall cause to be discharged into the atmosphere any gases that contain SO<sub>2</sub> in excess of 520 ng/J heat input (1.2 lb/MMBTU).

15. Under Section 111 of the Act, 42 U.S.C. § 7411, the Administrator promulgated the NSPS provision for “Equipment Leaks of Volatile Organic Compounds (VOC) in Synthetic Organic Chemicals Manufacturing Industry (SOCMI) for which construction, reconstruction or modification is commenced after January 5, 1981, and on or before November 7, 2006,” codified at 40 C.F.R. Subpart VV. Subpart VV applies to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves and control devices or closed vent systems.

16. “Synthetic organic chemicals manufacturing industry” as defined by 40 C.F.R. § 60.481, means “the industry that produces, as intermediates or final products, one or more of the chemicals listed in §60.489.” Among the chemicals listed in 40 C.F.R. 60.489 is ethanol.

17. 40 C.F.R. § 60.482-6(a)(1) provides that each open-ended valve or line must be equipped with a cap, blind flange, plug, or a second valve.

### **Title V Requirements**

18. Section 502(d)(1) of the Act, 42 U.S.C. § 7661a(d)(1) requires each State to develop and submit to EPA an operating permit program which meets the requirements of Title V. Pursuant to Appendix A of 40 C.F.R. Part 70, on November 14, 1995 (60 Fed. Reg. 57188), EPA granted Indiana interim approval of its program, with final approval on November 30, 2001 (66 Fed. Reg. 62969).

19. On December 11, 2001, EPA issued a Notice of Deficiency (NOD) with respect to Indiana’s Title V operating permit program, 66 Fed. Reg. 64039. Effective June 17, 2002, EPA took final action to approve the revisions that Indiana had made to its operating permit program in response to EPA’s NOD, 67 Fed. Reg. 34844-01. Indiana’s approved Title V operating permit program is codified at 326 IAC 2-7.

19. Section 503 of the Act, 42 U.S.C. § 7661b, as implemented by the regulations set forth at 40 C.F.R. Part 70, sets forth the requirement that a source submit a timely, accurate and complete application for a permit, including the information required to be submitted with the application. 40 C.F.R. § 70.5(a)(2) defines “complete application” to include information that is “sufficient to evaluate the subject source and its application and to determine all applicable requirements.”

20. Section 504(a) of the Act, 42 U.S.C. § 7661c(a), requires that each Title V permit include enforceable emission limitations and standards, a schedule of compliance, and other conditions necessary to assure compliance with applicable requirements, including those contained in a SIP.

21. 40 C.F.R. § 70.1(b) provides that: “All sources subject to these regulations shall have a permit to operate that assures compliance by the source with all applicable requirements.”

22. 40 C.F.R § 70.2 defines “applicable requirement” to include “(1) Any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the Act that implements the relevant requirements of the Act, including revisions to that plan promulgated in part 52 of this chapter . . .”

23. 40 C.F.R § 70.3 provides that the requirements of Part 70 apply to any major source located in a state that has received whole or partial approval of its Title V program.

24. 40 C.F.R. § 70.5(a) requires the owner or operator of a Part 70 source to submit a timely and complete permit application.

25. 40 C.F.R. § 70.7(b) provides, in part, that no Title V source may operate after the time that it is required to submit an application, except in compliance with its Title V permit.

### **Indiana’s Title V Requirements**

26. The Indiana regulations governing the Title V permitting program are codified at 326 IAC 2-7. Title V requirements are federally enforceable pursuant to Section 113 (a)(3), 42 U.S.C. § 7413(a).

27. 326 IAC 2-7-2 specifies the sources subject to 40 C.F.R. Part 70 requirements. 326 IAC 2-7-5 states that the content of the Part 70 permit include operational requirements and limitations that assure compliance by the source with all applicable requirements.

28. 326 IAC 2-7-3 requires that no source subject to 40 C.F.R. Part 70 requirements may operate without a permit as specified in the Act.

29. 326 IAC 2-7-4 requires that an owner or operator of a Part 70 source must submit a timely and complete permit application for a Title V permit with the required information specified in this rule.

### **FACTUAL BACKGROUND**

30. New Energy is incorporated in Indiana.

31. New Energy is a “person,” as that term is defined in Section 302(e) of the Act, 42 U.S.C. § 7602(e).

32. At all times relevant to this Notice, New Energy has been and is the owner and/or operator of a Riley-Stoker coal fired boiler, designated emission unit EU-14. New Energy produces ethanol and is therefore a synthetic organic chemical manufacturer.

33. During all times relevant to this Notice, the New Energy facility was located in an area classified as attainment for sulfur dioxide (SO<sub>2</sub>).

34. The New Energy Riley boiler (Riley boiler or EU-14) is a fossil fuel-fired steam generating plant located in South Bend, Indiana, at 3201 West Calvert Street in St. Joseph County, and has the potential to emit more than 100 tons per year of SO<sub>2</sub>.

35. The Riley boiler is a “fossil fuel boiler... totaling more than 250 million British thermal units per hour.” Therefore, the Riley boiler constitutes a “major stationary source” within the meaning of 40 C.F.R. § 52.21(b)(1)(i)(a); and a “major emitting facility” within the meaning of Section 169(1) of the Act, 42 U.S.C. § 7479(1).

36. On May 28, 1980 New Energy submitted to IDEM “Fuel Combustion Information” forms as a supplement to its application for construction. These forms proposed the construction of a coal-fired boiler with a maximum heat input capacity of 342.6 MMBTU/hr and a coal consumption of 106,734 tons per year.

37. On December 3, 1981, EPA granted a PSD approval limiting New Energy’s total heat input to any operating boiler or combination of operational boilers to 342.6 MMBTU/hr.

38. On October 18, 1996, New Energy applied for a Part 70 operating permit. On March 17, 2008, Title V permit T-141-6956-00033 (Title V Permit) was issued to New Energy allowing operation of the facility according to limits specified in its Approval to Construct.

39. On December 13, 2007, New Energy submitted a request to IDEM to revise its Title V permit to change the design heat input rate of its Riley boiler from 391 MMBTU/hr to 414 MMBTU/hr, and to remove the combined heat input limitation of 342.6 MMBTU/hr for its Riley Boiler and the two B&W package boilers.

40. On July 22, 2009, IDEM modified New Energy’s Title V permit, incorporating the revisions requested by New Energy.

41. New Energy’s Title V Permit Section D.1.1 (a)(1)(A) limits SO<sub>2</sub> emissions from the Riley boiler and package boilers to 1.2 lbs/MMBTU.

42. EPA issued Section 114 information requests to New Energy on November 3, 2009, and April 19, 2010.

43. On December 17, 2009, New Energy submitted a response to EPA’s November 3, 2009 information request. In its response, New Energy provided a copy of a 2003 Babcock Power Services, Inc. study of the Riley boiler titled “Engineering Study to Evaluate Boiler Performance at Increased Capacity.” The objective of the study was “to provide engineering services to evaluate boiler performance at steam capacities in excess of the boiler’s original 2-hour peak load of 302,500 lbs/hr.”

44. On December 24, 2009, EPA received New Energy’s supplemental response to EPA’s 114 information request dated October 23, 2009. New Energy stated the following in its response:



“The original permit contained a maximum HI limit of 342.6 MMBTU/hr. This was based on a predicted performance data sheet from Riley Stoker dated 2/20/81 which showed a predicted heat output of 342.4 MMBTU/hr at peak steam generation. This corresponds to a HI of 391 MMBTU/hr at a predicted boiler efficiency of 87.61%. The permit application mistakenly identified the heat output number as the HI capacity. The original HI capacity should have been 391 MMBTU/hr.”

45. On May 21, 2010, New Energy submitted a response to EPA’s April 16, 2010 information request. In its response, New Energy provided historical maximum hourly heat input for the Riley boiler from 2005 to April 2010, which showed that the Riley boiler has been operating at heat inputs of greater than 391 MMBTU/hr (boiler uprate) since at least November 2005.

46. On May 21, 2010, New Energy also provided data and purchase orders detailing the purchase and installation of 25 superheater tube loops (superheater tube replacement project). New Energy completed the superheater tube replacement project in April 2006. This superheater tube replacement project tracks one of the options set forth in the Babcock Power Services study.

47. New Energy’s December 2007 request to IDEM to amend its Title V permit did not contain sufficient information to allow IDEM to determine that New Energy’s operation of the boiler with a higher heat input rate had caused a significant increase in emissions and a significant net increase in emissions of SO<sub>2</sub>.

48. New Energy’s December 2007 request to IDEM to amend its Title V permit did not contain sufficient information about the physical change occasioned by the superheater tube replacement project to allow IDEM to determine that the project had also caused a significant increase in emissions and a significant net increase in emissions of SO<sub>2</sub>.

## **VIOLATIONS**

### **Violations of the Prevention of Significant Deterioration Provisions**

49. New Energy’s operation of the boiler with a higher heat input rate caused a significant emissions increase, as defined at 40 C.F.R. §§ 52.21(b)(40) and (b)(23)(i), of SO<sub>2</sub>.

50. New Energy’s operation of the boiler with a higher heat input rate caused a significant net emissions increase, as defined at 40 C.F.R. §§ 52.21(b)(3)(i) and (b)(23)(i), of SO<sub>2</sub>.

51. New Energy’s operation of the boiler with a higher heat input rate constituted a major modification as a “change in the method of operation,” as that term is defined at 40 C.F.R. § 52.21(b)(2)(i).

52. New Energy failed to obtain a PSD permit for its operation of the boiler at a higher heat input rate, as required by 40 C.F.R. § 52.21(a)(2)(iii)..

53. The operation of the boiler with a higher heat input rate does not fall within the exemptions to the definition of “major modification” found at 40 C.F.R. §52.21(b)(2)(iii).

54. New Energy violated and continues to violate Section 165(a) of the Act, 42 U.S.C. § 7475(a), and 40 C.F.R. § 52.21(a)(2)(iii), by changing the method of operation for the existing major source Riley boiler without applying for or obtaining a PSD permit and operating the modified unit without installing the best available control technology or going through PSD review, and installing appropriate emission control equipment in accordance with a BACT analysis.

55. New Energy’s superheater tube replacement project caused a significant emissions increase, as defined at 40 C.F.R. §§ 52.21(b)(40) and (b)(23)(i), of SO<sub>2</sub>.

56. New Energy’s superheater tube replacement project caused a significant net emissions increase, as defined at 40 C.F.R. §§ 52.21(b)(3)(i) and (b)(23)(i), of SO<sub>2</sub>.

57. New Energy’s superheater tube replacement project constituted a major modification as a “physical change,” as that term is defined at 40 C.F.R. § 52.21(b)(2)(i).

58. New Energy failed to obtain a PSD permit for the superheater tube replacement project, as required by 40 C.F.R. § 52.21(a)(2)(iii).

59. The superheater tube replacement project does not fall within the exemptions to the definition of “major modification” found at 40 C.F.R. §52.21(b)(2)(iii).

60. New Energy violated and continues to violate Section 165(a) of the Act, 42 U.S.C. § 7475(a), and 40 C.F.R. § 52.21(a)(2)(iii), when the facility undertook a superheater tube replacement project referenced in Appendix A for the existing major source Riley boiler, without applying for or obtaining a PSD permit and operating the modified unit without installing the best available control technology or going through PSD review, and installing appropriate emission control equipment in accordance with a BACT analysis.

61. The violations commenced on the date the Riley boiler was operated at a rate which increased emissions above the significance thresholds and continue until the appropriate PSD permit is obtained and the necessary pollution control equipment is installed and operated.

**Violations of the Standards of Performance for Fossil-Fuel Fired Steam Generating Units and the Standards of Performance for Equipment Leaks for VOC SOCMU Units**

62. New Energy exceeded the 1.2 lbs/MMBTU SO<sub>2</sub> limit set forth in 40 C.F.R. 60.43(a)(2) during the months of December 1995, December 2001, July 2009 and August 2009.

63. New Energy had 22 open-ended lines, as defined by 40 C.F.R. § 60.481a, during the September 10, 2009 EPA inspection. These open-ended lines are a violation of 40 C.F.R. § 60.482-

6(a)(1), which provides that each open-ended valve or line must be equipped with a cap, blind flange, plug, or a second valve.

64. These open-ended lines could lead to the emission of volatile organic chemicals (VOCs) into the atmosphere.

#### **Violations of the Title V Provisions**

65. The Riley boiler identified above is a "major source" as defined by Section 501(2) of the Act, 42 U.S.C. § 7661(2) and 40 C.F.R. § 70.2.

66. New Energy's Title V permit applications for the facility identified above failed to include the citation and description of all applicable requirements and other specific information that may be necessary to implement and enforce applicable requirements of the Act or to determine the applicability of such requirements, including, but not limited to, the requirement to apply/install BACT for SO<sub>2</sub>, as required by 40 C.F.R. § 70.5(c).

67. New Energy violated and continues to violate 40 C.F.R. § 70.5 by failing to supplement or correct the Title V permit applications for the Riley boiler. *See* 40 C.F.R. § 70.5(b).

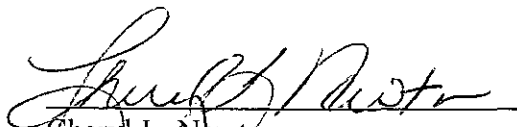
68. New Energy exceeded the Riley boiler heat input and SO<sub>2</sub> emission limitations in its Title V permit, in violation of 40 C.F.R. § 70.7(b).

#### **Environmental Impact of Violations**

69. Excess emissions of SO<sub>2</sub> increase the amount of acid rain and public exposure to unhealthy levels of SO<sub>2</sub>. SO<sub>2</sub> reacts with other chemicals in the air to form tiny sulfate particles. Long term exposure to high levels of SO<sub>2</sub> gas and particles can cause respiratory illness, aggravate existing heart disease, and lead to premature death.

70. Excess emission of VOCs increase ground level concentrations of ozone and can result in serious health effects, and harmful environmental and ecological effects.

Dated: 7/14/10

  
Cheryl L. Newton  
Director  
Air and Radiation Division

## **Appendix A**

Between 2004 and 2006, New Energy changed its method of operation for its Riley Boiler and made one physical change as well.

- Method of Operation Change: In November 2005, New Energy operated its Riley Boiler beyond its original 391 MMBTU/hr heat capacity.
- Physical Change: In October 2004, 8 of 25 superheater tube loops were replaced with tubes of identical size but different material. In April 2006, the remaining 17 superheater tube loops were replaced in a similar fashion. This project cost of \$123,609.00.

## CERTIFICATE OF MAILING

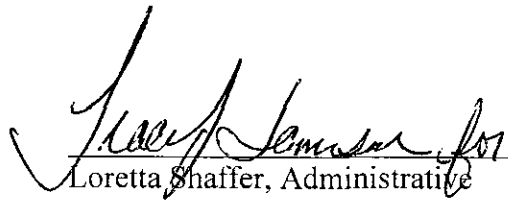
I, Loretta Shaffer, certify that I sent a Notice of Violation and Finding of Violation, No. **EPA-5-10-11-IN** by Certified Mail, Return Receipt Requested, to:

Tim Stickler  
Environmental Manager  
New Energy Corporation  
3201 West Calvert Street  
South Bend, Indiana 46613

I also certify that I sent copies of the Notice of Violation and Finding of Violation by first class mail to:

Phil Perry  
Office of Environmental Air Section  
Indiana Department of Environmental Management  
100 North Senate Avenue, Room 1001  
Indianapolis, Indiana 46206-6015

On the 15<sup>th</sup> day of July, 2010

  
\_\_\_\_\_  
Loretta Shaffer, Administrative  
Program Assistant

CERTIFIED MAIL RECEIPT NUMBER: 7009 1690 0000 7670 3956.